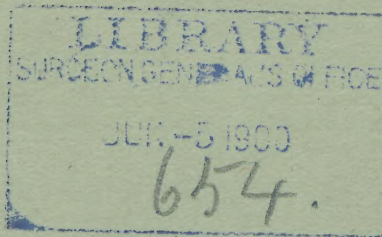


MINOT (C.S.)

OUR
UNSYMMETRICAL ORGANIZATION

BY
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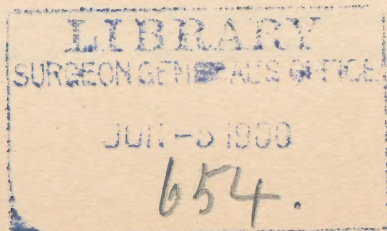
REPRINTED FROM THE HARVARD GRADUATES' MAGAZINE
FOR JUNE, 1897



OUR UNSYMMETRICAL ORGANIZATION.

IN order to gather more accurate conceptions as to the growth of the University, the following table was compiled, showing the gifts of money to Harvard College from 1868 to 1896, which period comprises twenty-eight complete College years. The headings "*Capital*" and "*Income*" include—the former, "*Gifts to form new funds, or increase old ones;*" the latter, "*Gifts for immediate use.*" Two further preliminary explanations are necessary. First, the "gifts" tabulated include only cash and property converted into cash or kept as an investment of University funds. Secondly, the tabulation does not include the following items: The value of buildings given to the University, the money for building which never came into the possession of the University, such as Memorial Hall, Peabody Museum Building, part of the Museum of Comparative Zoölogy Building, the Hemenway Gymnasium, Thayer Hall, Weld Hall, Matthews Hall, etc., and the value of certain lands and of many other gifts, not made in money. With these preliminary explanations, the tabulation may be accepted as officially verified, and is presumably absolutely exact.

It will be found that the average yearly amount for the period covered by the table is very nearly \$280,000. If we add the value of the new buildings mentioned above, it may be stated that the University has received in round numbers \$330,000 a year for the past twenty-eight years. The reader is requested to bear this amount in mind, for the sake of a comparison to be made below. The exact data may be added. The value of the buildings given the University has been officially estimated at \$1,300,000, and to



Our Unsymmetrical Organization.

GIFTS TO HARVARD UNIVERSITY, 1868-96.

	Capital.	Income.	Total.
1868-69	\$31,500.00	\$1,000.00	\$32,500.00
1869-70	118,390.00	4,247.28	122,637.28
1870-71	17,000.00	34,744.70	51,744.70
1871-72	108,768.11	14,430.00	123,198.11
1872-73	270,275.58	18,850.00	289,125.58
1873-74	106,356.19	6,183.95	112,540.14
1874-75	254,077.60	5,700.00	259,777.60
1875-76	209,050.99	5,040.00	214,090.99
1876-77	212,483.07	5,492.59	217,975.66
1877-78	26,257.09	4,450.00	30,707.09
1878-79	271,539.20	17,095.00	288,634.20
1879-80	138,613.76	69,417.17	208,030.93
1880-81	163,242.44	182,719.03	345,961.47
1881-82	186,503.87	157,099.68	343,603.55
1882-83	243,588.54	63,089.61	306,678.15
1883-84	258,438.90	81,346.29	339,785.19
1884-85	127,917.98	18,034.64	145,952.62
1885-86	214,902.56	44,483.21	259,385.77
1886-87	987,551.14	36,024.59	1,023,575.73
1887-88	330,180.09	254,524.09	584,704.18
1888-89	145,715.59	123,221.15	268,936.74
1889-90	277,282.03	162,225.49	439,507.52
1890-91	100,311.14	64,928.75	165,239.89
1891-92	440,369.38	76,162.82	516,532.20
1892-93	315,689.44	235,446.66	551,136.10
1893-94	129,044.10	53,846.22	182,890.32
1894-95	131,910.66	39,149.96	171,060.62
1895-96	197,615.65	46,175.40	243,791.05
Total			\$7,839,703.38

this must be added \$70,000 for land, the money for which did not come into the Treasurer's possession. The total is thus brought to \$9,209,703.38, one twenty-eighth part of which is \$328,918.

The following comparisons are instructive: —

	Invested Capital.	Total Income.
1868-69	\$1,754,147.47	\$212,388.34
1895-96	8,526,813.67	1,140,022.25

It thus appears that the permanent funds have increased about five fold, but the income has increased five and one half fold. Yet the average rate of interest on the University Funds has fallen from 7.59 per cent. in 1870-75 to 4.73 per cent. in 1895-96. We thus learn that, though the increase of University property has been enormous, a larger proportion of the income is derived from tuition-fees than formerly. In other words, the efficiency

of the College administration has progressed very rapidly, so that the share of the expense of educating each student to be borne by the endowment has lessened. Or, yet in other words, the rate of educational interest on the endowment has increased during the very period, while the rate of financial interest has shrunk almost half. It may be doubted whether a more striking index of the significance in Harvard history of President Eliot's administration can be found. There are certainly many persons, even among Harvard graduates, who do not realize that the wonderful material development of the University during the last quarter century has been accomplished by a much more rapid development in its educational power.

The total number of students in the University in 1868-69 was 1,043, of whom 514 were professional and graduate students, and 529 were undergraduates in Harvard College. That year, for the first time, there were included among the students of the University, students of the Episcopal Theological School, who really had no connection whatever with the University. They are, therefore, omitted. After a few years they were dropped from the University Catalogue. The total number of students in 1896-97 is 3,674, an increase of a little over three and one half fold in twenty-eight years.

If one examines the University to-day, an impartial mind cannot fail to be struck by its asymmetrical development, particularly in regard to financial resources. There are two striking facts: *first*, that the endowments have come principally to the branches of the University at Cambridge; *secondly*, that among the Cambridge departments there are two which far exceed any others in the extent of the gifts made to them. First, as to the general endowment: The total invested funds of the University in 1895-96 were \$8,526,813.67, of which \$462,712.48 belonged to the Medical, Dental, and Veterinary Schools — about one eighteenth. In the same year there were 3,600 students in the University, and 688 in the three Medical Departments mentioned, or nearly one fifth. In 1896-97 the whole number of students is 3,674; in the Medical Departments, 737: one fifth of the whole number would be 735. We have then the striking contrast of one fifth of the students aided by only one eighteenth of the endowment. The contrast would be much greater if the value of the buildings was

included in the reckoning. Still more clearly does the disproportion between men and means on the Medical side appear, if we consider the numbers of graduates. By the Quinquennial Catalogue of 1895 it is recorded that the total number of living graduates was 10,194; but 2,450 was the number of graduates from the Medical Departments, much more than one fourth, yet the endowment remains one eighteenth. Secondly, as to the two favored departments, the Astronomical Observatory and the Museum of Comparative Zoölogy: they both have a permanent equipment representing several hundreds of thousands of dollars, and their permanent endowments are large; for the Observatory, \$784,573.73; for the Museum, \$586,718.42 (both 1895-96). No one who is informed as to the wise application of these funds can question their great utility, nor have any other wish than that they should be further increased. A great university, however, should be all-sided and symmetrical, and those departments of a university which are least advanced in their growth necessarily claim assistance most pressingly. It is a wise policy to attend first to the weakest parts. Symmetrical strength is the true university ideal.

A university naturally breaks up into departments, each department representing a natural division of studies. We have now reached through experience the knowledge that the division into departments is essential and fundamental, the division into schools is accessory and for administrative convenience, and, though inherited from our honored past, cannot be admitted as essential. "Department," in the present sense, is necessarily a somewhat vague term, but will be understood probably sufficiently well through current usage.

A "department" is the unit of university organization. Reduced to its minimum dimensions, a "department" must comprise at least one professor, who requires at least one experienced helper or instructor, and several assistants; it must also be furnished with a building containing work rooms and lecture halls, and with teaching appliances, be they books, collections, or apparatus; there must be several servants, and accommodations for 300 to 400 students, who must be enabled to carry on both elementary and advanced work. The minimum amount for which such a department can be organized is certainly not less than \$300,000.

For a fair presentation of the conditions it must be added that the instruction given to the students in the Medical, Dental, and Veterinary Schools is of the most costly kind. The instruction is based exclusively on laboratory and clinical work; the lectures are purely accessory. Each student has to perform personally his own laboratory and clinical work, and we have learned from experience that twelve students is the maximum number which, on the average, one teacher can supervise satisfactorily at one time. There are no courses, such as are numerous in the Academic and Graduate Schools, which can be effectively given to 100, or 200, or even 300 students at once by a single man. According to recent tables, out of some 23,000 hours of College instruction, scarcely 11 per cent. involve laboratory methods; 89 per cent. can be given to large classes. Just the reverse is true of the Medical courses, for they are almost wholly impossible for large classes. In brief, it lies in the unalterable nature of the subjects taught, that the Medical Schools need, in proportion to their numbers of students, very much larger resources than do any of the Schools of the University at Cambridge, whereas, as we have seen, their actual resources are much smaller.

The data presented render it practicable to estimate the extent of certain needs of the three Schools, Medical, Dental, and Veterinary. There are at least seven Departments common to these Schools, all engaged in teaching the various sciences on which all branches of Medical Practice are founded. The Departments are: 1. Anatomy (human and comparative). 2. Physiology. 3. Histology and Embryology. 4. Pathology. 5. Bacteriology. 6. Pharmacology. 7. Hygiene.

Each of the seven departments needs to be organized on the minimum basis of \$300,000, making in all an endowment of \$2,100,000. This sum is needed at once, in addition to funds in hand, for the proper establishment of the Medical Sciences on a university scale. We see elsewhere in this country, and in all the leading universities of Europe, the establishment of corresponding laboratories on a scale often far more liberal than that here indicated.

There can be little question that Harvard will achieve this result. If gifts should continue only at the same average as during the past twenty-eight years, and if all the gifts went to the three

Medical Schools, it would require barely more than six years to complete the required amount, and six years is a very short time in the history of a university. We may draw further encouragement from other aspects of our recent history, and especially from the frequency with which those needs of the University, which from time to time appeared most urgent, have in one way and another been met by private generosity. We have another element of strength in our President, who has labored to advance the University, not according to an abstract ideal, but in the more statesman-like way, which directs effort to whatever development is attainable. If it is true, as here maintained, that the greatest possibility of progress at present open to the University is in strengthening the Medical side, we may be sure that our President will not fail us.

Assuming the plans indicated to have become the accepted policy of Harvard, there would still remain a question of University organization to be settled. This is of the first importance, and it has been already raised by our President: Shall the Medical, Dental, and Veterinary Schools remain entirely separate organizations, or shall they be subjected to administrative consolidation? This question has been twice posed before the Medical Faculty, and the consolidation has been publicly advocated by the President in his last Annual Report (for 1895-96, p. 28).¹ The plan of consolidation has been applied to the College, Graduate and Scientific Schools; substantial advantages have resulted; experience within the University favors consolidation. As regards the three Schools in Boston, it is evident that by uniting their efforts and resources the chance of developing the necessary scientific laboratories will be much increased, whereas if they remain separate they will become more and more rivals for public favor, with the inevitable consequence of a great loss of public support. Does not sound judgment favor consolidation?

Conclusions. It has been shown: First, that Harvard University has received annually during the past twenty-eight years in round numbers \$330,000. Secondly, that the educational efficiency of the University has increased faster than its endowment. Thirdly, that the three Schools, Medical, Dental, and Veterinary, comprise one fifth of the students, have furnished one fourth of the graduates,

¹ See the *Graduates' Magazine* for March, 1897, p. 369.

and have received one eighteenth of the endowment. Fourthly, that the minimum adequate endowment for a single department is \$300,000. Fifthly, that there are seven scientific departments, in which the Medical, Dental, and Veterinary Schools have a common interest, which need immediate endowment. Sixthly, that if the gifts continue as heretofore, six years would suffice to furnish the required amount. Seventhly, that there are reasons for believing that the development of the seven departments mentioned would be facilitated by the consolidation of the Medical, Dental, and Veterinary Schools under a single Faculty.

Charles Sedgwick Minot, p '78.

